

**BRIEF FOR APPELLEE DIRECTOR OF THE
UNITED STATES PATENT AND TRADEMARK OFFICE**

United States Court of Appeals
for the Federal Circuit

No. 2007-1196
(Serial No. 10/658,143)

IN RE PAUL LEW AND JASON SCHIERS

Appeal from the United States Patent and Trademark Office,
Board of Patent Appeals and Interferences.

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Representative Claim:

Claim 19:

A hub with clutch comprising:

- a) a hub body including a first sleeve and a second sleeve;
- b) the first sleeve includes an outer surface that includes a plurality of slots, wherein said slots are provided with a forward section, a tapered section, and an outwardly sloping surface extending from the forward section to the tapered section;
- c) the second sleeve includes a wall that includes a plurality of steps; and
- d) a plurality of curved members, wherein said curved members travel from the forward section along the outwardly sloping surface toward the tapered section, whereat the curved members contact the steps and transfer torque between the first sleeve and the second sleeve.

A138.

TABLE OF CONTENTS

I. STATEMENT OF THE ISSUE	1
II. STATEMENT OF THE CASE	2
III. STATEMENT OF THE FACTS	3
A. The Prosecution History	3
1. The Invention As Originally Described In The ‘143 Application	3
2. The Original Claims	5
3. First Office Action and Lew’s Response Thereto	7
B. The Board Decision	11
III. SUMMARY OF THE ARGUMENT	12
IV. ARGUMENT	13
A. Standard of Review	13
B. Substantial Evidence Supports the Board’s Finding That Appellant’s Substitute Specification Contains New Matter	14
1. Lew’s Spherical Ball Bearings Do Not Inherently Disclose All “Curved Members” That Could Be Made to Work with Lew’s Clutch Assembly	14
2. Lew’s Argument That the Original Specification Disclosed More than Ball Bearings for the Clutch Assembly Is Waived	20
C. Substantial Evidence Supports the Board’s Finding That Claim 19 Is Not Supported by the Original Disclosure	23
V. CONCLUSION	25

TABLE OF AUTHORITIES

FEDERAL CASES

<i>Alton, In re</i> 76 F.3d 1168 (Fed. Cir. 1996)	24
<i>Brooktree Corp. v. Advanced Micro Devices, Inc.</i> , 977 F.2d 1555 (Fed. Cir. 1992)	13
<i>Consolidated Edison Co. v. NLRB</i> , 305 U.S. 197 (1938)	13
<i>Consolo v. Fed. Mar. Comm’n</i> , 383 U.S. 607 (1966)	13
<i>Cordis Corp. v. Medtronic AVE, Inc.</i> , 339 F.3d 1352 (Fed. Cir. 2003)	18
<i>Curtis, In re</i> 354 F.3d 1347 (Fed. Cir. 2004)	15, 18, 19
<i>Gartside, In re</i> , 203 F.3d 1305 (Fed. Cir. 2000)	13
<i>Gentry Gallery, Inc. v. Berkline Corp.</i> , 134 F.3d 1473 (Fed. Cir. 1998)	16, 19
<i>Kolmes v. World Fibers Corp.</i> , 107 F.3d 1534 (Fed. Cir. 1997)	14
<i>Moba, B. V. v. Diamond Automation, Inc.</i> , 325 F.3d 1306 (Fed. Cir. 2003)	23
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) (<i>en banc</i>)	20

<i>Rasmussen, In re</i> 650 F.2d 1212 (C.C.P.A. 1981)	18
<i>Schering Corp. v. Amgen, Inc.</i> , 222 F.3d 1347 (Fed. Cir. 2000)	14
<i>SciMed Life Systems, Inc. v. Advanced Cardiovascular Sys., Inc.</i> , 242 F.3d 1337 (Fed. Cir. 2001)	15
<i>Tronzo v. Biomet, Inc.</i> , 156 F.3d 1154 (Fed. Cir. 1998)	23
<i>Vas-Cath, Inc. v. Mahurkar</i> , 935 F.2d 1555 (Fed. Cir. 1991)	13
<i>Watts, In re</i> , 354 F.3d 1362 (Fed. Cir. 2004)	21
<i>Wright, In re</i> , 866 F.2d 422 (Fed. Cir. 1989)	24

FEDERAL STATUTES

35 U.S.C. § 101	8
35 U.S.C. § 102	10
35 U.S.C. § 112, paragraph 1	2, 10, 13, 14, 18, 23
35 U.S.C. § 112, paragraph 2	10
35 U.S.C. § 132	2, 9, 14, 18

STATEMENT OF RELATED CASES

- (a) The Director is not aware of any other appeal involving the underlying decision in this case that was previously before this or any other appellate court.
- (b) The Director is also not aware of any pending case in this or any other court that will directly affect, or be directly affected by, this Court's decision in this appeal.

**BRIEF FOR APPELLEE DIRECTOR OF THE
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2007-1196
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IN RE PAUL LEW AND JASON SCHIERS

Appeal from the United States Patent and Trademark Office,
Board of Patent Appeals and Interferences.

I. STATEMENT OF THE ISSUE

Applicants Paul Lew and Jason Schiers (collectively “Lew”) patented a bicycle wheel clutch assembly that uses *ball bearings* to couple two physically separate “sleeves” of the wheel hub. The current application, a continuation of the patented application, identically refers to the “invention” as using ball bearings. However, in response to a statutory double-patenting rejection of the pending claims drawn to a hub and clutch assembly using ball bearings, Lew cancelled the original claims and presented new claim 19 that recites “curved members” instead of ball bearings for the clutch assembly. At the same time, Lew attempted to substitute a specification that replaced, in several places, the

term “ball bearing” with the term “curved member.” The Board found that (i) the broadening substitution of “curved member” for “ball bearing” impermissibly introduced new matter into the specification, and (ii) claim 19 was not adequately supported by Lew’s original written description. The issue on appeal is whether the Board’s findings are supported by substantial evidence.

II. STATEMENT OF THE CASE

The examiner rejected claim 19, the only claim at issue in this appeal, as not supported by an adequate written description as required by 35 U.S.C. § 112, paragraph 1. A78-80.¹ The examiner also objected to, and declined to enter, a substitute specification that Lew filed on August 20, 2004, because it contained new matter in violation of 35 U.S.C. § 132. A77. The Board affirmed the examiner’s objection to the substitute specification, and affirmed the examiner’s written-description rejection of claim 19.

¹ Citations to the Appendix will be referred to as “A___,” and citations to the Lew brief will be referred to as “Br. at ___.”

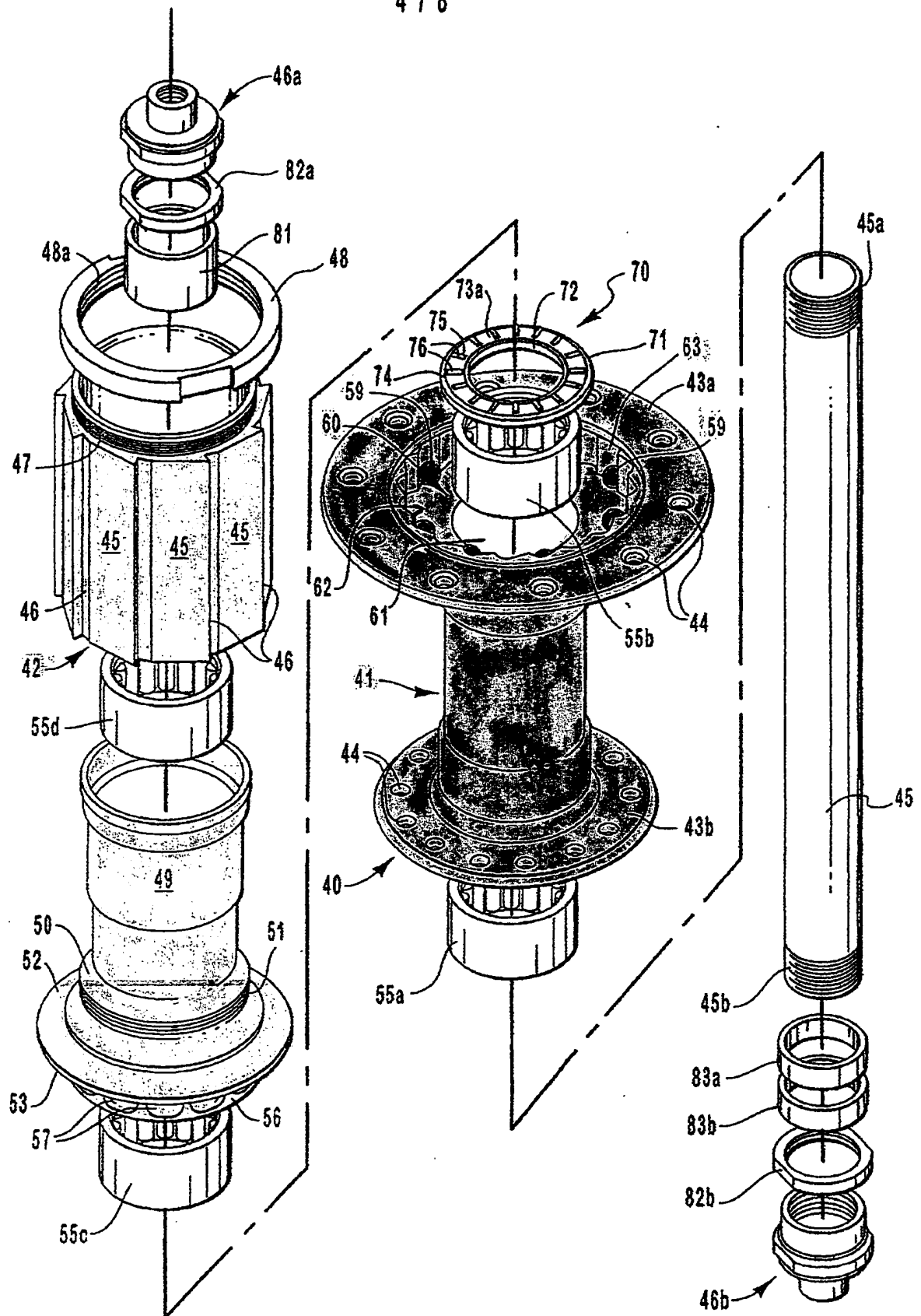


FIG. 4

III. STATEMENT OF THE FACTS

A. The Prosecution History

Lew filed U.S. Application No. 10/658,143 (“the ‘143 application”), entitled “Wheel Hub with Clutch,” on September 9, 2003. The ‘143 application is a continuation of U.S. Patent Application No. 09/840,778, filed on April 25, 2001, which issued as U.S. Patent No. 6,644,452 (“the ‘452 patent”) on November 11, 2003.

1. The Invention As Originally Described In The ‘143 Application

The ‘143 application describes a “wheel hub with clutch” for bicycles and other vehicles. The clutch of the invention, like prior-art bicycle hub clutches, permits the hub and wheel of the bicycle to “free wheel,” or rotate in the forward direction, when no torque is applied (*i.e.*, the rider is not pedaling), but “locks” the hub to a pedal drive mechanism when torque is applied to the hub (*i.e.*, the rider is pedaling). A195-97.

According to Lew, “[t]he hub of [t]he invention facilitates torque transfer through a multitude of ball bearings that are each housed in contoured pockets that interface with an opposing face of an annular ring of the hub body whereto a wheel is supported through spokes, ribs, or the like.” A197. He further states

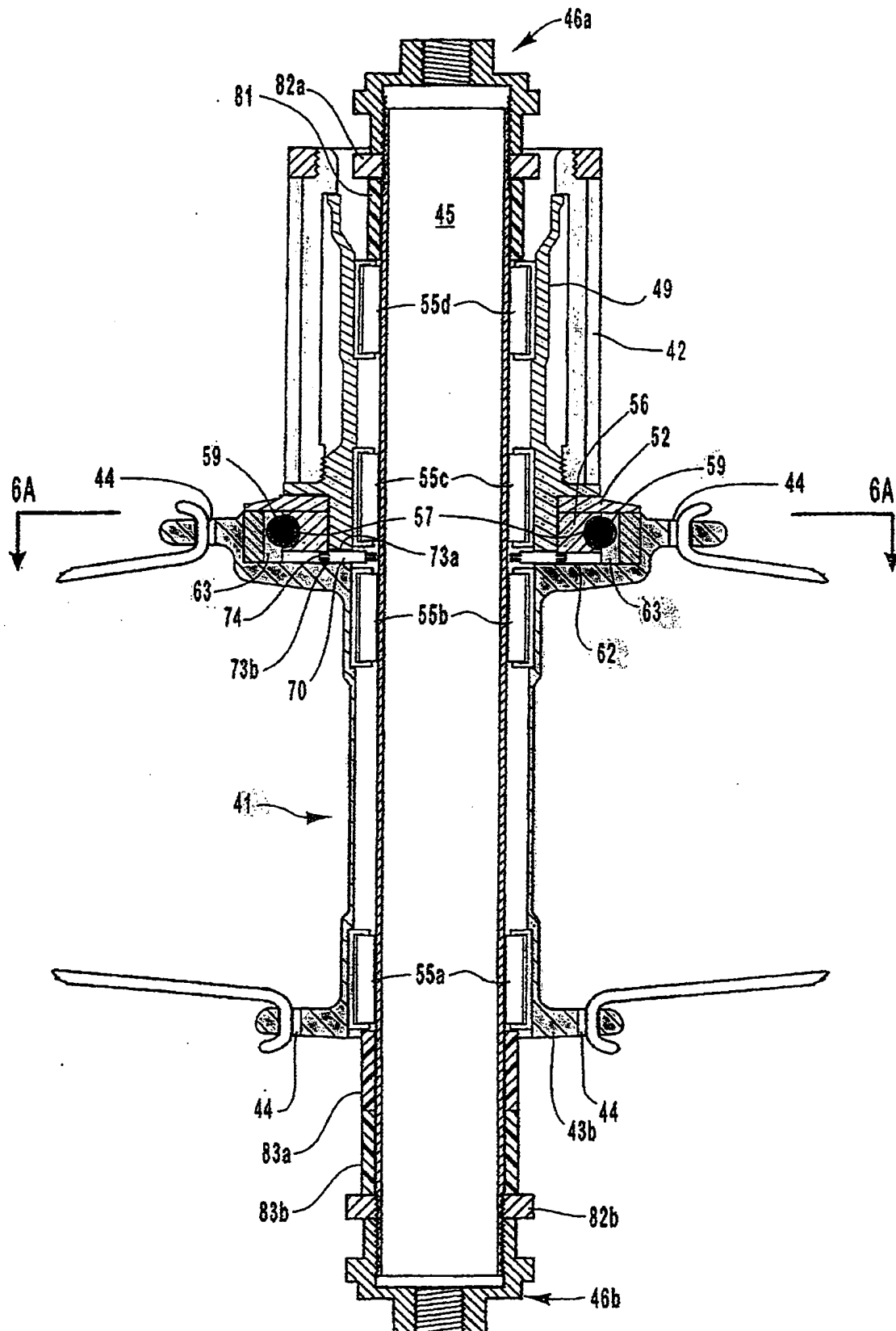


FIG. 5

that it is a “principal object of the present invention to provide a hub clutch bearing assembly that provides for a nearly instantaneous coupling of hub inner and annular sections across ball bearings for transferring torque from the hub inner section to the outer section whereto a wheel rim is secured.” A198.

The disclosed hub and clutch is composed of three primary parts: two “sleeves” fitted end-to-end, and a plurality of “ball bearings” fitted between the sleeves. A204-05. More specifically, as best shown in figures 4, 5, 6A, 6B and 6C of the ‘143 application,² the hub is primarily composed of a (1) “gear spline sleeve” **42** to which is connected at one end a “ring” **56** having spaced contoured pockets **57**; (2) a “center sleeve” **41** that has at one end a “center cup section” **60** with adjacent wall **62** comprising a series of “ring steps” **63**; and (3) ball bearings **59** housed in the contoured pockets **57** of the ring **56**. A204-06; A221-24. The center sleeve **41** is connected to the rim of the wheel via spokes, and the gear spline sleeve **42** holds one or more gears that are connected via a bicycle chain to the pedals. A204.

² Figures 4, 5, 6A, 6B and 6C are reproduced on facing pages 3-6. These reproductions are color coded so that in each figure: (1) the gear spline sleeve **42**, ring **56**, and pockets **57** are green; (2) the center sleeve **41**, wall **62**, and ring steps **63** are blue; (3) the ball bearings **59** are orange; and (4) the roller bearings **55a**, **55b**, **55c**, and **55d** are yellow.

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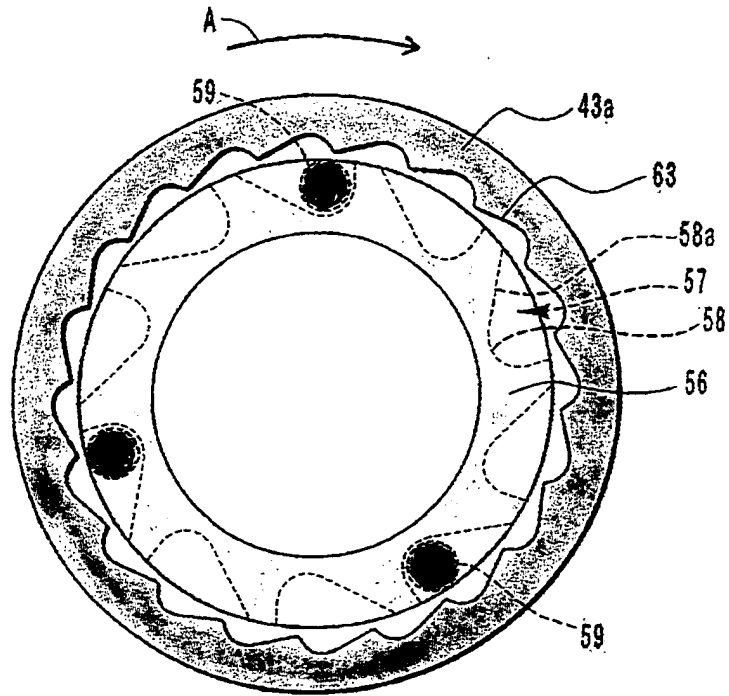


FIG. 6A

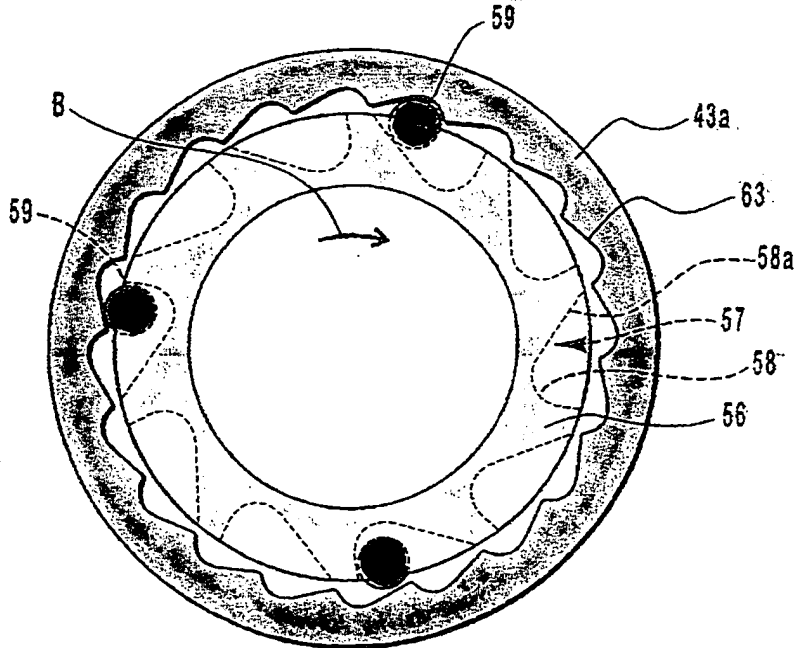


FIG. 6B

When assembled, the center sleeve **41** is fitted end to end with the gear spline sleeve **42**, such that the wall **62** of the center sleeve fits around the outside of ring **56** of the gear spline sleeve, with the ball bearings **59** spanning the cavity between them. A206; A222-24. An axle **45** is fitted through the center of the two sleeves. Since the axle remains stationary at all times, several cylindrical “roller bearings” are fitted between the axle and the two sleeves to help the sleeves rotate about the axle. A204-05.

When the rider pedals, the chain turns the gear and thus the gear spline sleeve **42** and ring **56**. This causes the ball bearings **59** to roll up the edge of the contoured pockets **57** and engage the ring steps **63**, thereby locking the gear spline sleeve **42** to the center sleeve **41**. This locking permits torque to be transferred from the pedals to the wheel. A206. When the rider stops pedaling, the gear spline sleeve **42** and ring **56** are stationary, so that the ball bearings roll away from and disengage the ring steps **63**, unlocking the center sleeve **41** from the gear spline sleeve **42**, thus permitting the center sleeve **41**, and thus the wheel, to continue rotating. A206-07.

2. The Original Claims

The ‘143 application contained 18 claims, all of which recite the use of ball bearings in the hub clutch. For example, claim 1 reads:

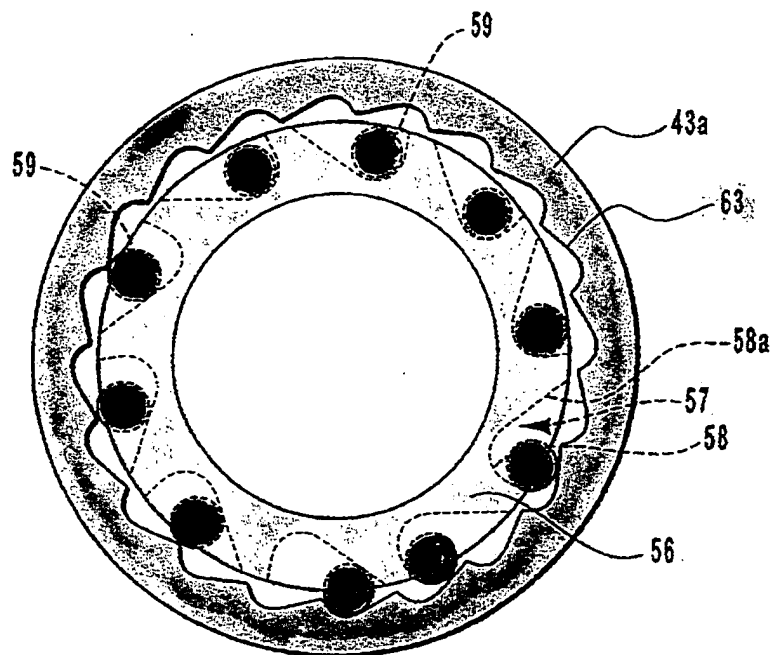


FIG. 6C

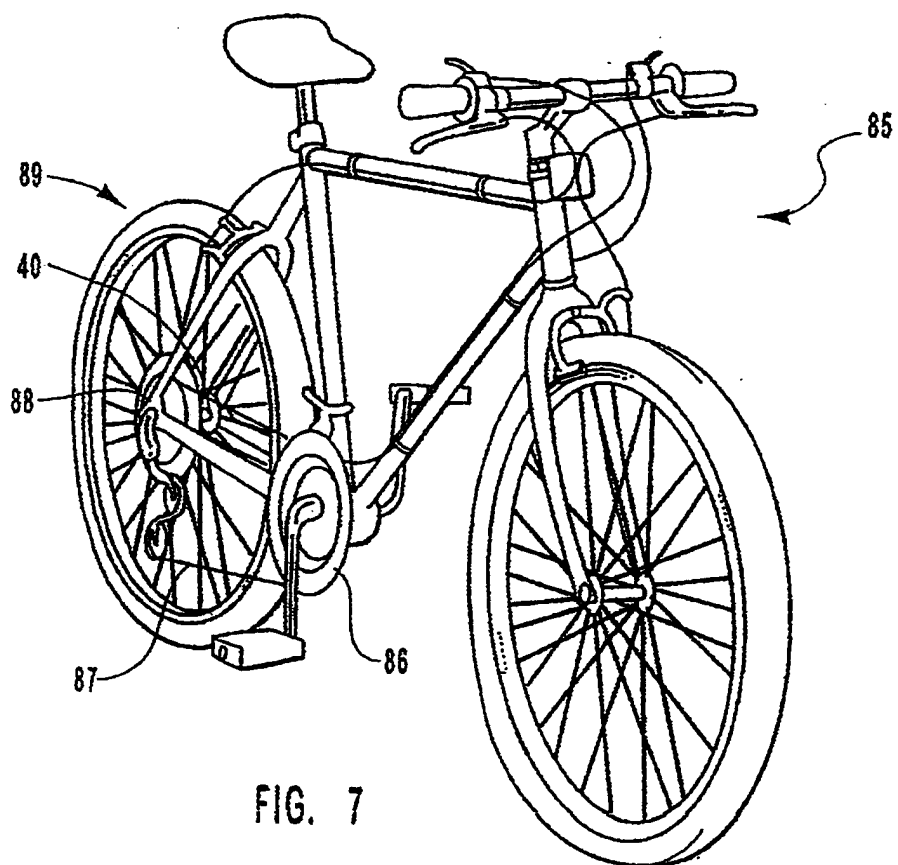


FIG. 7

A hub with clutch comprising,

[a] a hub body including a first sleeve that includes a means for mounting a driven [sic] gear thereon, and a second sleeve that includes means for arrangement as a wheel hub;

[b] a hub clutch arranged between said first and second sleeves including of [sic]

[1] a ring section fitted onto an end of said first sleeve and includes identical spaced pockets formed at equal spaced intervals around and into said ring section outer surface, with each said pocket including a deep forward section formed to accommodate a *ball bearing* fitted therein and each said pocket includes an outwardly sloping surface extending from said forward section to, or near to, said ring section surface, and

[2] an end of said second sleeve includes an annular ring section that is adjacent to a cavity wherein said ring section is fitted such that, when said hub is assembled, said spaced pockets opposed an outer surface of said annular ring section, and including

[3] *ball bearings* contained in said pockets to roll from said pocket along said pocket outwardly sloping surface to engage and bind against said annular ring section surface, and

[c] with said first and second sleeves including center passages that align to receive bearings for fitting therein that receive an axle fitted through center openings of said bearings; and

[d] a straight axle for fitting through said bearings center openings and including coupling means for fitting onto ends of said straight axle for mounting to a frame.

A211 (emphasis added; formatted for clarity).

3. First Office Action and Lew's Response Thereto

The examiner rejected claims 1-18 – all of the then-pending claims – as claiming the same invention as that of claims 1-18 of the '452 patent. A188, A190. The examiner made clear that the only way to overcome this “statutory type” double patenting rejection is by canceling or amending the conflicting claims so they are no longer coextensive in scope with those of the '452 patent. *Id.*

Lew responded by (1) canceling claims 1-18, (2) submitting new claim 19; and (3) submitting a “substitute specification.” A137-139. New claim 19 reads:

A hub with clutch comprising:

- a) a hub body including a first sleeve and a second sleeve;
- b) the first sleeve includes an outer surface that includes a plurality of slots, wherein said slots are provided with a forward section, a tapered section, and an outwardly sloping surface extending from the forward section to the tapered section;
- c) the second sleeve includes a wall that includes a plurality of steps; and
- d) a plurality of *curved members*, wherein said *curved members* travel from the forward section along the outwardly sloping surface toward the tapered section, whereat the *curved members* contact the steps and transfer torque between the first sleeve and the second sleeve.

A138 (emphasis added).

The principal difference between the canceled claims and new claim 19 is that in the new claim Lew substituted the term “curved members” for “ball bearings.” *Compare* A139 with A211.³ Lew made these changes to broaden the scope of claim 19 over the canceled claims and thereby traverse the statutory double-patenting rejection:

Claims 1-18 were rejected under 35 U.S.C. § 101 because, according to the Examiner, claim[s] 1-18 claim the same invention as that of claims 1-18 of [the ‘452 patent] to Lew *et al.* Applicants have obviated this rejection by way of the aforementioned amendments to the claims and respectfully request the withdrawal of this rejection.

A139.

Lew attempted to make similar changes to the specification by way of his substitute specification. In the substitute specification Lew attempted to replace the term “ball bearing(s),” when that term appeared in connection with the clutch of the invention, with the term “curved members.”⁴ A171-73; A179-86.

³ Lew also replaced the limitation directed to the shape of the pocket accommodating the ball bearing with the “tapered section” limitation. *Compare* A139 with A211.

⁴ Lew also changed “contoured pocket” and “sloping pockets” to “slots.” *See, e.g.,* A171-73.

Lew's substitute specification also attempted to replace two instances of the term "roller bearing" mistakenly used to refer to the ball bearings shown in figures 6B and 6C, with the term "curved members." A175.⁵ Lew left unchanged those instances of the term "roller bearing" that correctly referred to the cylindrical bearings situated between the axle and the sleeves. *Compare* A179, A183 with A205, A208. Finally, Lew's substitute specification replaced the term "ball surface," which refers to the surface of each ball bearing, with the term "curved members." A173.

The examiner subsequently issued a final rejection. A75. The examiner first objected to the substitute specification under 35 U.S.C. § 132 because it "introduces new matter in the disclosure." A77. The examiner explained that "the added material, which is not supported by the original disclosure is, for example, the *curved member(s)* as supposed [sic] to the originally disclosed *ball bearing(s)*." *Id.* (emphasis in original). Accordingly, the examiner did not enter the substitute specification.⁶

⁵ This mistaken reference to "roller bearing" for "ball bearing" is discussed *infra* at 22.

⁶ The examiner later objected to a "supplemental" substitute specification, which included new claims 20-38, that Lew filed on November 8, 2004. This objection is not relevant to the present appeal and claims 20-38 are not at issue in

The examiner next rejected claim 19 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, because “the present specification does not disclose or provide clear definitions to support the claimed ‘plurality of curved members.’” A78.⁷

Lew appealed the final rejection to the Board. Lew argued that the originally disclosed “ball bearings” inherently disclosed “curved surfaces,” so that his substitute specification did not introduce new matter. A41. Lew further argued that the substitute specification provides sufficient disclosure to support the terminology of claim 19 for purposes of complying with the written description requirement. *Id.* Notably, Lew did not argue that the ‘143 application taught any specific structure, such as roller bearings, that could be used instead of ball bearings in the clutch mechanism. Nor did Lew dispute the examiner’s assertion that “[c]urved members not only define the originally recited ball bearings but also encompass other types of members or bearings such

this appeal.

⁷ The examiner also rejected claim 19 under 35 U.S.C. § 112, second paragraph, and under 35 U.S.C. § 102. The examiner withdrew the indefiniteness rejection and the Board reversed the section 102 rejection, so neither rejection is at issue in the present appeal.

as cylindrical bearings, tapered bearings, sleeve bearings, and roller bearings.”

A30 (Examiner’s Answer).

B. The Board Decision

The Board affirmed the examiner’s objection to Lew’s substitute specification, and also affirmed the examiner’s rejection of claim 19 as not complying with the written description requirement. A7-10. The Board found that “the phrase ‘curved member’ is much broader and far more encompassing than a ‘ball bearing,’ and that a ‘ball bearing’ is a small subset of ‘curved members.’” A7. The Board further found that “not all curved members can carry out the claimed operation of the claimed curved members[.] For example, a basketball, an M&M candy and the curved surface of a computer mouse can all be considered to be curved members, but are not capable of functioning as the curved members of appellants’ claims.” A8.

The Board found nothing in the original disclosure that would have indicated that anything other than a ball bearing could be used for the clutch mechanism of the invention. A8. The Board noted that “appellants have not pointed to any portion of the original disclosure that would have indicated to an artisan that element(s) 59 could be anything other than ‘ball bearings.’” *Id.*

III. SUMMARY OF THE ARGUMENT

Substantial evidence supports the Board's finding that Lew's substitute specification contains impermissible new matter. Lew originally disclosed and claimed a new clutch mechanism for bicycle wheel hubs that uses ball bearings to couple the two sleeve portions of the hub. Since Lew disclosed the use of ball bearings for this purpose in the context of his "invention," and not merely a particular embodiment thereof, one of ordinary skill in the art would have understood from his original disclosure that his invention is limited to the use of ball bearings for this purpose. Lew's substitute specification, however, removes all significant mention of ball bearings in connection with the clutch of his invention, and replaces that term with the indisputably broader term "curved members." This broadening of the disclosure to a different invention, beyond what Lew disclosed as his invention at the time the application was filed, constitutes new matter.

Substantial evidence also supports the Board's finding that Lew's original disclosure does not provide an adequate written description of claim 19. Unlike Lew's original claims, claim 19 is not limited to the use of ball bearings, but more broadly claims any "curved member" for the clutch. Since a person of ordinary skill in the art would understand from Lew's original disclosure that his

invention is limited to the use of ball bearings for the clutch assembly, claim 19 is not supported by the original disclosure.

IV. ARGUMENT

A. Standard of Review

Whether Lew's substitute specification contains new matter is a question of fact. *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1574 (Fed. Cir. 1992). Similarly, whether claim 19 is adequately supported by the original written description under 35 U.S.C. § 112, paragraph 1, is a question of fact. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991). On appeal, the Board's factual findings are reviewed for substantial evidence. *In re Gartside*, 203 F.3d 1305, 1315 (Fed. Cir. 2000). Substantial evidence "means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938). "[T]he possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence." *Consolo v. Fed. Mar. Comm'n*, 383 U.S. 607, 620 (1966) (citation omitted).

B. Substantial Evidence Supports the Board's Finding That Appellant's Substitute Specification Contains New Matter

Under Section 132 of the Patent Act, an amendment may not introduce “new matter” into the disclosure of an invention. 35 U.S.C. § 132. “The fundamental inquiry is whether the material added by amendment was inherently contained in the original application.” *Schering Corp. v. Amgen, Inc.*, 222 F.3d 1347, 1352 (Fed. Cir. 2000). To answer this question, this Court has explained that “the new matter prohibition is closely related to the adequate disclosure requirements of 35 U.S.C. § 112.” *Id.* “Thus, to avoid the new matter prohibition, an applicant must show that its original application supports the amended matter.” *Id.* (citing *Kolmes v. World Fibers Corp.*, 107 F.3d 1534, 1539 (Fed. Cir. 1997)).

1. Lew's Spherical Ball Bearings Do Not Inherently Disclose All “Curved Members” That Could Be Made to Work with Lew's Clutch Assembly

The Board found that the original disclosure does not support the substitute specification, and thus agreed with the examiner's determination that the substitute specification contains new matter. A8-10. This finding is supported by substantial evidence. Specifically, Lew's original disclosure characterizes the use of ball bearings in the clutch as part of the “invention,” not simply in

terms of a specific embodiment. For example, Lew states that “[t]he hub of [t]he invention facilitates torque transfer through a multitude of *ball bearings* that are each housed in contoured pockets that interface with an opposing face of an annular ring of the hub body whereto a wheel is supported through spokes, ribs, or the like.” A197 (emphasis added). Similarly, Lew states:

It is a principal object of *the present invention* to provide a hub clutch bearing assembly that provides for a nearly instantaneous coupling of hub inner and annular ring sections across *ball bearings*. . . . Another object of *the present invention* is to provide a wheel hub clutch where engagement of hub inner and outer sections is through a plurality of *ball bearings*.”

A198-99 (emphasis added). Lew’s characterization of his “invention” as requiring ball bearings for the clutch mechanism is “strong evidence” that a person of ordinary skill in the relevant art would read the original disclosure as being limited to the use of ball bearings for this purpose, and would therefore *not* read it as inherently disclosing the use of any alternatives (such as roller bearings). See *SciMed Life Systems, Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343 (Fed. Cir. 2001) (characterization of the coaxial configuration as part of the “present invention” is “strong evidence that the claims should not be read to encompass the opposite structure”); *In re Curtis*, 354 F.3d 1347, 1352 (Fed. Cir. 2004) (holding that substantial evidence supports the

Board's finding that a person of ordinary skill would not read disclosure of micro-crystalline wax (MCW) as describing the genus of all friction-enhancing coatings, because of the "numerous instances in [the disclosure] where Curtis spoke only of MCW as a suitable friction enhancing coating for PTFE dental floss"); *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479-80 (Fed. Cir. 1998) (holding that because written description made clear that locating recliner controls on console was an essential part of the invention, claims not limited to controls located on the console were not adequately supported by the written description).

Lew argues that the Board erred in interpreting "curved member" to include M&M candy, basketballs, and the curved surface of a computer mouse, because one of ordinary skill in the art would understand that chocolate candy, computer equipment and basketballs would be unsuitable in a hub and clutch mechanical device. Br. at 8-10. In so arguing, Lew acknowledges that "curved member" is broader than "ball bearing," and can, for example, encompass cylindrical roller bearings. Br. at 9-10.

Lew's argument misperceives the Board's purpose in setting forth its interpretation of "curved member." The Board's point was that "curved member" is a broad genus that could include many species that would not

necessarily work in the present invention. Assuming, *arguendo*, that there are “curved members,” other than ball bearings, that could work in a bicycle clutch of Lew’s general design, Lew’s disclosure of ball bearings as the *invention’s* means of coupling the hub sleeves together, *see, e.g.*, A199, simply does not inherently disclose those other structures. Indeed, a spherical ball bearing’s unique ability to turn in any direction “and thereby preclude scuffing of the ball surface over time and repeated couplings,” *id.*, would seem to forestall any argument that disclosure of ball bearings “inherently” discloses nonspherical structures.

Nevertheless, Lew argues that an application may be amended to disclose what was inherently contained in the original disclosure without running afoul of the new matter prohibition; since ball bearings are inherently curved, Lew argues that he did not introduce prohibited new matter in replacing “ball bearings” with “curved member.” Br. at 10-12. This argument might have merit if Lew merely sought to *add* to his original disclosure a reference to the curved surface of ball bearings. But in seeking also to *delete* any teaching of the use of ball bearings in his invention, he sought to delete those other inherent aspects of ball bearings, such as their spherical shape. Thus, it is the replacement of “curved members” for “ball bearings” in connection with the clutch of the invention that broadens

the scope of the original disclosure and thus constitutes the prohibited new matter. This conclusion is fully in accord with this Court's precedent. In *Curtis*, for example, this Court found that the disclosure of microcrystalline wax (MCW) as a friction-enhancing coating for PTFE dental floss did not adequately disclose all friction enhancing coatings for such floss, even though MCW had the inherent property of enhancing the coefficient of friction of that type of floss. *Curtis*, 354 F.3d at 1352-54.

Lew also argues: "That 'curved member' is broader than a ball bearing does not introduce new matter into the specification; as this Court has warned, '[b]roadening a claim does not add new mater [sic] to the disclosure.'" Br. at 10 (*quoting In re Rasmussen*, 650 F.2d 1212, 1214 (C.C.P.A. 1981)). But *Rasmussen* does not, as Lew implies by taking this quote out of context, provide blanket approval to broaden a claim after filing. Rather, the *Rasmussen* court sought merely to warn against rejecting as "new matter" under 35 U.S.C. § 132 an overly broad claim that should instead be rejected under 35 U.S.C. § 112, paragraph 1.

Finally, Lew argues that he was not required to disclose multiple species of "curved members" in order to adequately disclose the entire genus of "curved members." Br. at 14 (citing *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d

1352, 1365 (Fed. Cir. 2003)). Admittedly, it is possible to adequately describe a genus merely by describing a species thereof, under certain circumstances, such as when the disclosure of the species “clearly conveys to one of skill in the art characteristics common to all species that explain how and why they make the invention operable.” *Curtis*, 354 F.3d at 1356. On the other hand, when it is clear from the original disclosure that the disclosed species is an important part of the *invention*, one of ordinary skill in the art would not understand from that disclosure that the entire genus has been described. *Id.* at 1352; *Gentry Gallery*, 134 F.3d at 1479-80.

This is precisely the case here. Lew states repeatedly in the original written description that his invention requires ball bearings in the clutch mechanism. *See, e.g.*, A197 (“The hub of [t]he invention facilitates torque transfer through a multitude of ball bearings”); A198 (“It is a principal object of the present invention to provide a hub clutch bearing assembly that provides for a nearly instantaneous coupling of hub inner and annular sections across ball bearings”); A199 (“Another object of the present invention is to provide a wheel hub clutch where engagement of hub inner and outer sections is through a plurality of ball bearing[s] where the ball bearings each turn between engagements and thereby preclude scuffing of the ball surface over time and

repeated couplings”). It is clear from this context, in which Lew described the use of ball bearings as part of the invention, that he did not contemplate any alternative means for coupling the “inner and annular sections” of the hub clutch assembly. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (*en banc*) (holding that the manner in which patentee uses a term within the specification and claims usually makes clear whether the patentee is setting out specific examples of the invention, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive). Thus, the original written description would not adequately disclose to one of ordinary skill in the art that anything other than a ball bearing, such as a roller bearing or any other “curved member,” could be used in the clutch mechanism.

2. Lew’s Argument That the Original Specification Disclosed More than Ball Bearings for the Clutch Assembly Is Waived

Lew asserts that the original specification does disclose the use of something other than ball bearings for the clutch mechanism. He states in this regard that the Board “erred in construing Applicants’ specification as disclosing only a single-embodiment [sic] utilizing a ‘ball bearing,’ when clearly the ‘143 Application disclosed more, such as the use of a ‘roller bearing’ and the use of a ‘ball surface.’” Br. at 7; *see also* Br. at 10 (“The Board simply

failed to recognize that Applicants had disclosed more than a ‘ball bearing.’”).

Lew is apparently referring here to the disclosure of the “ball surface” of a *ball bearing*, and his mistaken use of the term “roller bearing” for ball bearing in the “Brief Description of the Drawings” section of the original disclosure.

This argument fails for two reasons. First, Lew never made this argument to the Board. He argued below only that the replacement of “ball bearings” with “curved members” was proper because the change merely made explicit the inherent “curved nature of the spherical ball bearings that were originally disclosed.” A40-41. He did not argue that he originally disclosed *alternatives* to ball bearings for the purpose of coupling the two hub sleeves. Accordingly, this argument is waived. *In re Watts*, 354 F.3d 1362, 1367-68 (Fed. Cir. 2004) (refusing to hear argument not presented to the Board).

Second, this argument is meritless. The original disclosure only mentions the “ball surface” of a *ball bearing*:

Another object of the present invention is to provide a wheel hub clutch where engagement of hub inner and outer sections is through a plurality of ball bearing [sic] where the ball bearings each turn between engagements and thereby preclude scuffing of the ball surface over time and repeated couplings.

A199. This single reference hardly constitutes an alternative embodiment of his invention, but rather reinforces the point that there are no alternative

embodiments; the clutch of the “present *invention*” requires the use of ball bearings to engage the “hub inner and outer sections” (sleeves).

Similarly, the original specification does not disclose an embodiment of the clutch that uses roller bearings to engage the two sleeves of the hub. Rather, the original specification only mistakenly uses the term “roller bearings,” on two occasions, to mean *ball* bearings. Specifically, the “Brief Description of the Drawings” section describes figure 6B as “showing the *roller* bearings in the hub inner section pockets” of ring 56. A201, line 11 (emphasis added). Figure 6C is also described here as “showing the *roller* bearings as having fully moved into binding engagement between the hub inner section pockets and the hub outer section stepped portions.” *Id.*, line 15 (emphasis added). However, it is clear from figures 6B and 6C that spherical *ball* bearings, rather than cylindrical roller bearings, are employed between the two sleeves. A223-24. This is also clear from the “Detailed Description of the Invention” section, where Lew states:

FIGS 6A and 6B show the cavity between gear spline sleeve spaced pockets 57 and ring step 63 surface as accommodating three *ball* bearings 59. Whereas, FIG. 6C shows ten *ball* bearings 59, arranged one in each gear spline sleeve contoured pocket 57.

A207 (emphasis added); *see also* A206 (describing figures 6A, 6B, and 6C as showing a “plurality of ball bearings 59”). Thus, the two appearances of the

term “roller bearings” in the “Brief Description of the Drawings” to describe the ball bearings shown in figures 6B and 6C are erroneous, and Lew did not actually disclose the use of roller bearings, or any other structure, in place of ball bearings for the clutch assembly. *See Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1159 (Fed. Cir. 1998) (rejecting patentee’s argument that the patent’s description of the invention as a “trapezoid,” a “truncated cone,” or a cup of “conical shape” constituted three different species of the invention, since “[a] reading of the specification demonstrates that these labels described the *same* cup” (emphasis in original)).

C. Substantial Evidence Supports the Board’s Finding That Claim 19 Is Not Supported by the Original Disclosure

The purpose of the written description requirement is to “ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him.” *Moba, B. V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319 (Fed. Cir. 2003) (internal citations omitted). That is,

When the scope of a claim has been changed by amendment in such a way as to justify an assertion that it is directed to a different invention than was the original claim, it is proper to inquire whether the newly claimed subject matter was described in the patent application when filed as the invention of the patents. That is the

essence of the so-called ‘description requirement’ of § 112, first paragraph.

In re Wright, 866 F.2d 422, 424 (Fed. Cir. 1989).

It is unclear from his opening brief whether Lew is even arguing that claim 19 is adequately supported by his original disclosure. Lew asserts, for example, that the Board’s finding that his substitute specification contains prohibited new matter “caus[ed] claim 19 to fail the written description requirement of 35 U.S.C. § 112, first paragraph.” Br. at 7. This suggests that he believes that adequate support for claim 19 may be found only in his substitute specification. Indeed, if he had believed the original specification also adequately supports claim 19, he would not have needed to submit a substitute specification.

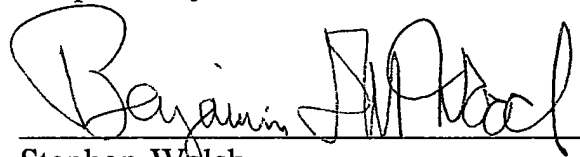
In any event, substantial evidence supports the Board’s finding that Lew’s original disclosure does not support claim 19. Claim 19 does not recite the use of ball bearings in the clutch assembly, but rather the use of “curved members,” a term that undisputably includes other structures besides ball bearings. But as discussed above, the original disclosure would not suggest any alternatives to ball bearings for the purpose of coupling the two sleeves of the clutch mechanism, and thus would not suggest to a person of ordinary skill in the art the genus of all “curved members.” *See In re Alton*, 76 F.3d 1168, 1175

(Fed. Cir. 1996) (when amended claim covers embodiments “completely outside” the scope of the original specification, a *prima facie* case has been made that the amended claim is not adequately supported by the original specification). Accordingly, the original disclosure does not provide adequate support for claim 19.

V. CONCLUSION

Since substantial evidence supports the Board’s findings that Lew’s substitute specification contains new matter, and that Lew’s original disclosure does not adequately support claim 19, the Board’s decision should be affirmed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Stephen Walsh", written over a horizontal line.

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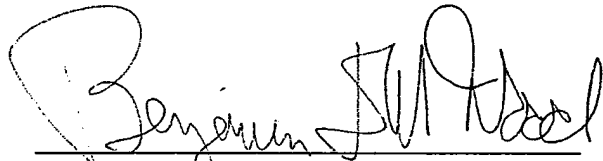
*Attorneys for the Director of the
United States Patent and
Trademark Office*

June 18, 2007

CERTIFICATE OF SERVICE

I hereby certify that on June 18, 2007, I caused two copies of the foregoing
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TRADEMARK OFFICE to be sent by overnight delivery to the following address:

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